

**ABSTRACT**

A system and method for measuring an animal includes a light source and an optical source. The light source, which is preferably an array of monochromatic light emitting diodes, at least partially backlights one or more of the animal's legs. The optical sensor or device, which is preferably a single dimension camera or charged-coupled device, opposes the light source and obtains an image that includes silhouettes of one or more legs of the animal. A processor, such as a computer with software and data storage, determines measurements, such as the approximate skeletal trunk length of the animal, from the silhouetted legs in the image. One or more first ultrasound transducers can be arranged to determine an approximate height of the pelvic region, and one or more second ultrasound transducers can be arranged to determine an approximate width of the pelvic region.